

What is claimed is;

1. A substrate cleaning system comprising:

a system body 1 capable of being sealed;

a loading/unloading booth A comprising a substrate carry-in section Aa in which a plurality of substrates are stocked and standby to be carried in before cleaning treatment is applied to them and a substrate carry-out section Ab in which a plurality of substrates are stocked and standby to be carried out after cleaning treatment was applied to them;

a processing booth C provided with at least one sheet-type substrate cleaning chamber 10 in which a cleaning treatment can be applied to a plurality of substrates by a plurality of cleaning solutions; and

a robot booth B provided with a transport robot for transporting the substrates one by one between the processing booth C and the loading/unloading booth A;

wherein the respective booths are partitioned by partition walls each having a required minimum cross sectional area.

2. The substrate cleaning system according to Claim 1, wherein the loading/unloading booth A and the robot booth B are respectively installed back and forth at both sides of the system body system body 1;

the robot booth B are sandwiched between the loading/unloading booth A and the processing booth C; and

the loading/unloading booth A has closing openings 11, 12 which are openable to an operating space provided outside the system body 1.

3. The substrate cleaning system according to Claim 1 or 2, wherein the substrates to be stocked in the carry-in section Aa and carry-out section Ab of the loading/unloading booth A are aligned horizontally with a given alignment pitch in a vertical direction, and clean air flowing inside the loading/unloading booth A directs from the carry-in section Aa to carry-out section Ab.

4. The substrate cleaning system according to any of Claims 1 to 3, wherein the carry-in section Aa and the carry-out section Ab have substrate holding sections 60 for holding carriers in which a plurality of substrates are stocked in a horizontal state with a given alignment pitch in a vertical direction, and an elevation positioning unit 61 for positioning the substrates to be carried in or out from the carriers 56.

5. The substrate cleaning system according to Claim 4, wherein each substrate holding section 60 has at least two holding tables 60a, 60a which hold each carrier 56 and are disposed vertically with a given interval.

6. The substrate cleaning system according to any of Claims 1 to 5, wherein the transport robots 70 in the robot booth B are formed of a twin arm robot each provided with a pair of hand sections 70a, 70b movable vertically and horizontally, and wherein one of hand

sections transports the substrate before they are subjected to a cleaning treatment while the other hand section transports the substrate after they are subjected to the cleaning treatment.

7. The substrate cleaning system according to Claim 6, wherein each substrate holding section 60 provided at the tip end of each hand section of the transport robot 70 has a soft landing type supporter for transporting and supporting the lower surface of each substrates.

8. The substrate cleaning system according to any of Claims 1 to 7, wherein the robot booth B has a substrate reversing unit 71 which turns each substrate upside down on its front and back face.

9. The substrate cleaning system according to any of Claims 1 to 8, wherein corrosion resistance coating treatment is applied to the inner wall surface of the processing booth C with vinyl chloride resin and oxidation resistance painting treatment is applied to the other wall side of the processing booth C.

10. The substrate cleaning system according to any of Claims 1 to 9, wherein a sheet-type substrate cleaning chamber 10 in the processing booth C is provided with a plurality of circular processing baths (85 to 88) which are aligned vertically, and comprises a chamber body 80 which moves vertically, and a substrate rotating unit 81 which is disposed concentrically with the chamber body 80 at the center and rotates a piece of substrate horizontally while supporting it horizontally, and wherein the substrates supported by the substrate rotating unit 81 and the circular

processing baths (85 to 88) are positioned when the chamber body 80 moves up and down vertically.

11. The substrate cleaning system according to Claim 10, wherein the chamber body 80 is a sealed container provided with an openable substrate carry-in gate 90.

12. The substrate cleaning system according to Claim 10 or 11, wherein the chamber body 80 comprises a chemical supply section 91 for supplying cleaning solution onto a substrate surface supported by the substrate rotating unit 81, an inert gas supply section 92 for supplying inert gas so as to discharge and exchange cleaning solution, and a drain section provided in each processing bath so as to drain cleaning solution or inert gas in each processing bath.